

REMARKS

Please enter the amendments to the claims made in response to the International Preliminary Examination Report for purposes of the U.S. National Phase.

The specification has been amended herein to include section headings at appropriate locations and to remove minor informalities from the specification. Clean and marked up versions of the replacement paragraphs to be entered have been included herewith.


Claims 5 and 7 have been amended herein to remove multiple dependancies therefrom. Marked-up versions of the claims have been included herewith showing the changes to the claims. In addition new claims 8-9 have been added to the application which are supported by the original specification.

Respectfully submitted,

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Marked up version of page 1, paragraph 1, as amended.

--TITLE OF THE INVENTION--

Method for Changing Linear Load On A Reel-Up

--FIELD OF THE INVENTION--

The present invention relates to a method for changing the linear load on a reel-up of a paper web. The reel-up primarily comprises an initial reeling device, a reeling shaft, a reeling cylinder and a loading device.

--BACKGROUND OF THE INVENTION--

The concept of linear load refers to the force required in the reeling, which loads the paper reel formed on the reeling shaft. Said force required in the reeling is applied to the reel formed on the reeling shaft primarily via the reeling cylinder in such a way that the necessary force, linear load, is generated via the nip between the outer perimeter of said reeling cylinder and the outer perimeter of the reel that is being formed, when the loading of said nip is at least primarily generated by means of force devices acting on the ends of the reeling shaft. In the initial reeling device the formation of the bottom portion of the reel on the reeling shaft takes place, whereafter the reeling shaft is transferred to the loading device to be reeled to form a full paper reel.

Marked up version of page 3, paragraph 2, as amended.

--SUMMARY OF THE INVENTION--

By means of the method according to the invention, it is possible to avoid additional loading exerted on the reeling shaft at that stage when the reeling shaft is transferred from the initial reeling device to the loading of that loading device by means of which most of the reel is formed.

[The method according to the invention is primarily characterized in what will be presented in the characterizing part of the appended claim 1.]

Marked up version of page 3, paragraph 4, as amended.

--BRIEF DESCRIPTION OF THE DRAWINGS--

In the following, the method according to the invention will be described by means of an example with reference to the appended drawings, in which:

Marked up version of page 4, first full paragraph, as amended.

--DETAILED DESCRIPTION OF THE INVENTION--

[In this case the] The method according to the invention is implemented by means of a reel-up according to Fig. 1, in which locking jaws 3 of the initial reeling device 9 correspond to the primary forks of the aforementioned patent FI-71107 and secondary jaws 8 journaled pivotable in the vertical plane in reeling carriages 6 correspond to the secondary forks of the patent, the jaw on the side of the reeling cylinder 4 being a locking jaw and the jaw on the other side of the end of the reeling shaft being a guide jaw. The reeling carriages 6 move along guide rails by means of linear bearings and hydraulic cylinders 11 which produce the loading of the reel, and of which the term "loading actuator" will be used hereinbelow. The loading device by means of which the reel is loaded against the reeling cylinder 4, is composed of hydraulic cylinders 11 and a mechanism by means of which the hydraulic cylinders are in a power transmitting connection with the ends of the reeling shaft, more precisely with the bearing housings of the reeling shaft. The mechanism, by means of which the force of the hydraulic cylinders is transmitted to the ends of the reeling shaft, is in this case composed of the reeling carriages 6 and the guide jaws 8. For the purpose of measuring the diameter of the reel, the reeling carriages 6 are provided with devices for measuring the position, which are placed on both sides of the machine. In the reel-up, the reel is supported in a known manner by the ends of the reeling shaft by means of reeling rails 5 or corresponding supporting elements.

Marked-up version of claims as amended.

5. Method according to [any of the foregoing claims] claim 1, **characterized** in that at that stage when the load applied to the reeling shaft (1) is transferred from the initial reeling device (9) to the loading device, within a given time the loading caused by the initial reeling device (9) is reduced from a given initial value nearly down to zero or to zero at the same time when the loading of the loading device is increased from zero to a given final value.

7. Method according to [any of the foregoing claims] claim 1, **characterized** in that during the initial reeling the reeling shaft (1) is kept in the locking jaws (3) of the initial reeling device (9), and during the transfer of the load the pivotable guide jaws (8) of the reeling carriages (6) or the like movable by means of the loading actuators (11) start to load the reeling shaft (1).